



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

May 8, 2009

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, DC 20426

SUBJECT: Draft Environmental Impact Statement for a New Major License for the Catawba-Wateree Hydroelectric Project, FERC Project No. P-2232-522 in Alexander, Burke, Caldwell, Catawba, Gaston, Iredell, Lincoln, McDowell, and Mecklenburg Counties, North Carolina; and Chester, Fairfield, Kershaw, Lancaster, and York Counties, South Carolina

Dear Secretary Bose:

The U.S. Environmental Protection Agency (EPA) has reviewed the referenced Draft Environmental Impact Statement (EIS) in accordance with its responsibilities under Section 309 of the Clean Air Act and Section 102(2)(C) of the National Environmental Policy Act (NEPA). The Federal Energy Regulatory Commission (FERC) proposes to approve a major new license for the Catawba-Wateree Hydroelectric Project, FERC Project No. 2232 (Project). The Project is located in the Catawba-Wateree River Basin in Alexander, Burke, Caldwell, Catawba, Gaston, Iredell, Lincoln, McDowell, and Mecklenburg Counties, North Carolina; and Chester, Fairfield, Kershaw, Lancaster, and York Counties, South Carolina. Duke Energy Carolinas, LLC (Duke Energy) owns and operates the Project. The current license was issued in 1958 and expired on August 31, 2008. On August 29, 2006, Duke Energy filed an application with FERC for a new license under Part I of the Federal Power Act to continue operating its existing Project. In the interim, FERC issued an annual license, which will continue (renewed on an annual basis) until FERC has made a decision on a new license.

The Project has an authorized installed capacity of 831 megawatts and includes 13 hydroelectric dams and 11 reservoirs in central North and South Carolina. The Project spans over 225 river miles, has a total drainage area of 4,750 square miles, and encompasses approximately 1,700 miles of reservoir and island shoreline. Reservoirs along the Project include James, Rhodhiss, Hickory, Lookout Shoals, Norman, Mountain Island, Wylie, Fishing Creek, Great Falls, Cedar Creek, and Wateree. The Catawba River becomes the Wateree River at its confluence with Big Wateree Creek located at the upper end of Lake Wateree in South Carolina. There are four regulated river reaches of varying lengths below Bridgewater, Oxford, Wylie, and Wateree. There are also six bypassed river reaches affected by the Project: the Old Catawba River and Paddy Creek Bypass Reaches below Bridgewater; Mountain Island Bypass Reach below Mountain Island; the Great Falls Long and Short Bypass Reaches below Fishing Creek; and the Wateree Bypass Reach below Wateree Dam.

Three alternatives were evaluated in the Draft EIS: 1) the no action alternative (continued operation as required by the existing licenses); 2) Comprehensive Relicensing Agreement (CRA), including conditions developed by Duke Energy in cooperation with a number of public and private stakeholders; and 3) FERC staff-recommended alternative for both licenses. The FERC staff alternative, which includes the CRA conditions and some additional modifications, is the preferred alternative.

EPA participated in Duke Energy's enhanced-traditional FERC relicensing process since its inception in 2003 and was a designated "interested party" in the comprehensive settlement agreement proceedings referenced in the Draft EIS. We were active participants on the North Carolina and South Carolina State Relicensing Teams, as well as on different resource committees, including the Water Quality Resource Committee. EPA assisted in the development of specific study plans and conducted reviews and submitted comments on draft study reports. EPA also submitted comments on the Draft License Application in April 2006. EPA was actively involved in the development of the Agreement-In-Principle (AIP) and continues to support many of the protection and enhancement measures included in the AIP, and subsequent CRA. However, EPA did not sign either the AIP or the CRA due to concerns related to our statutory, regulatory role and other technical issues.

Despite not signing the CRA, EPA strongly supports the collaborative process that was used to develop the CRA, as well as many of the individual elements contained in the CRA that are now largely represented in the FERC staff alternative. This agreement represents significant attempts on the part of Duke Energy to balance many stakeholder interests through intensive mutual gains negotiations. The settlement agreement described in Section 2.2 of the Draft EIS constitutes a comprehensive and balanced approach to water and natural resource management within the Project area and downstream.

There are significant environmental protection and enhancement measures proposed as part of the CRA and FERC staff alternatives for the new license. EPA would like to highlight those that are of particular importance for inclusion in the new license for these projects. EPA supports the increased and more regular downstream flows (measured as either daily average or continuous minimum) throughout the Project to better protect aquatic life, particularly in the bypassed reaches below the Bridgewater and Fishing Creek developments. The restoration of flows and improved aquatic use support in these bypass reaches is an important achievement of the relicensing process. EPA also supports the limitations on Project reservoir level fluctuations during important spring spawning periods and the proposed drought contingency plan, or low inflow protocol (LIP), which prescribes how the Project would be operated and water conserved during periods when there is not enough water in the system to meet all needs. The inclusion of the LIP in the new license is vital to ensure that the critical low flows necessary to continue to meet water quality standards and aquatic life use support are provided during times of drought.

Another important element of the preferred alternative is inclusion of commitments by Duke Energy to undertake a series of Project modifications designed to increase dissolved

oxygen (DO) concentrations and enhance water quality in the Project tailwaters. Currently discharges from all eleven developments do not meet state water quality standards for DO during several months of the year. As new measures to improve water quality, Duke Energy's proposed DO enhancement program will result in structural modifications (e.g., installation of aerating runners) at Bridgewater, Rhodhiss, Oxford, Wylie and Wateree dams and will utilize existing equipment modifications (e.g., vacuum breakers, stay vanes) at other developments to increase DO concentrations to meet state water quality standards. Monitoring will be utilized to determine the effectiveness of aeration on water quality. In this regard, EPA supports inclusion of the proposed DO enhancement program in the new license, including rigorous continuous monitoring, to validate success of the project modifications.

In our scoping letter, EPA requested to be more involved in the development of the DO enhancement and monitoring programs. EPA appreciates the recognition by FERC that EPA should be involved in the development and implementation of the Flow and Water Quality Implementation Plan (FWQIP) and the Water Quality Monitoring Plan (WQMP). EPA was involved in the initial formulation of these plans, and it is clear that these two plans have largely been completed and submitted to the States of North Carolina and South Carolina for inclusion in the Clean Water Act (CWA) Section 401 certifications for the Project. Therefore, EPA requests to be involved in any consultations related to any revisions of the FWQIP or WQMP, as well as to receive copies of the annual report verifying compliance with applicable water quality standards.

In addition, several waterbodies in the project area, including many of the mainstem reservoirs and riverine sections, are not meeting their designated uses and are considered impaired by the States of North Carolina and South Carolina due to turbidity, high pH, nutrients, and low dissolved oxygen. To address these issues, Duke Energy agreed in the CRA to consult with appropriate state agencies in the development of any future Total Maximum Daily Load (TMDL) processes that are required within the FERC project boundary or on the Catawba and Wateree Rivers and their associated floodplains and bottomlands from Lake James downstream to the confluence of the Wateree River with the Congaree River during the term of the new license. This is currently reflected in the Draft EIS as an important water quality commitment. It is unclear if this commitment is to be included as part of a specific license article; however, it is assumed that if the Section 401 certification incorporates by reference this section of the CRA that it will be a requirement of the new license. EPA recommends that FERC address this issue in the Final EIS.

EPA does have some environmental concerns related to water quality in project dam releases from the Bridgewater development. EPA offers the following clarification regarding water quality standards that have changed since the publication of the Draft EIS for the Catawba River below the Bridgewater development. On Page 97, the Draft EIS correctly identifies that a section of the Catawba River from 0.6 mile upstream of Muddy Creek to 0.7 mile upstream of Canoe Creek was reclassified by the North Carolina Division of Water Quality (NCDWQ) to Class Tr (Trout waters). This initial reclassification also included a seasonal exemption from the

DO criterion applicable to Trout waters. However, in accordance with 40 CFR 131.21(c), new and revised State and Tribal water quality standards are not effective for CWA purposes until approved by EPA. When the Draft EIS was published, EPA had not yet reviewed the revised standards. On March 18, 2009, EPA partially approved the designation of this section of the Catawba River for Trout use, with a disapproval of the seasonal DO exemption. EPA's letter to NCDWQ is attached for further explanation.

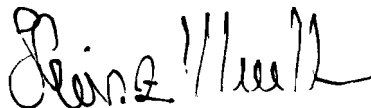
These new standards do not include the stretch of the Catawba River immediately downstream of the Linville dam, but take effect a short distance downstream. Duke Energy is building a new powerhouse at the Linville dam that will include aeration capability on all units to meet applicable DO standards. Duke Energy also proposes to install a new flow valve with aerating capability that would support new minimum flow releases into the Catawba bypassed reach that would flow into the Catawba River at Muddy Creek. During deliberations of the Water Quality Resource Committee, there was uncertainty regarding the final approach/strategy to meeting water quality standards below Bridgewater due to the potential upgrades associated with the Linville powerhouse rehabilitation project as well as the uncertainty over the final water quality standards in this section of the river. This is recognized in Footnote 2 from Appendix L of the FWQIP, which states that, "Regardless of the alternative chosen, the new facilities [at Bridgewater] will be designed to provide the prescribed flows and meet the applicable state water quality standards."

In reviewing the Section 401 water quality certification issued by NCDWQ on November 14, 2008, there is an expectation that the Project will not result in a violation of the applicable water quality standards and discharge guidelines. Even though these new standards were not in place at the time of certification, EPA feels strongly that the certification requires Duke Energy to meet all applicable water quality standards, including the newly established water quality standards, to be protective of the trout species found in this section of the river. Since this development is proposed to have significant aeration capabilities installed as part of improvements described above, EPA expects Duke Energy to meet these standards in the future and utilize these capabilities as conditions require. Duke Energy currently has proposed a monitoring location for compliance that is approximately in the same location at the point at which the new standard takes effect. It is our position that this compliance location would be appropriate to determine the extent to which discharges from the dam meet the Class Tr water quality standards.

We rate this document EC-1 (Environmental Concerns). Enclosed is a summary of definitions for EPA ratings. This rating is based on concerns that the proposed action identifies the potential for impacts to aquatic species in the Catawba River below the Bridgewater development. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. Implementation of the extensive environmental protection measures and monitoring programs, as described in the Draft EIS, will be critical to minimizing environmental impacts of the overall Project.

We appreciate the opportunity to review the proposed action. Please contact Ben West of my staff at (404) 562-9643 if you have any questions or want to discuss our comments further.

Sincerely,

A handwritten signature in black ink, appearing to read "Heinz J. Mueller". The signature is fluid and cursive, with the first name "Heinz" being more prominent.

Heinz J. Mueller, Chief
NEPA Program Office
Office of Policy and Management

Enclosures

cc: U.S. Environmental Protection Agency, Region 4 Water Protection Division
U.S. Fish and Wildlife Service, Asheville Field Office
U.S. Fish and Wildlife Service, Charleston Field Office
NOAA National Marine Fisheries Service
North Carolina Division of Water Resources
North Carolina Division of Water Quality
North Carolina Wildlife Resources Commission
South Carolina Department of Natural Resources
South Carolina Department of Health and Environmental Control
Duke Energy Carolinas, LLC

U.S. ENVIRONMENTAL PROTECTION AGENCY ENVIRONMENTAL IMPACT STATEMENT (EIS) RATING SYSTEM CRITERIA

EPA has developed a set of criteria for rating Draft EISs. The rating system provides a basis upon which EPA makes recommendations to the lead agency for improving the draft.

RATING THE ENVIRONMENTAL IMPACT OF THE ACTION

- **LO (Lack of Objections):** The review has not identified any potential environmental impacts requiring substantive changes to the preferred alternative. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposed action.
- **EC (Environmental Concerns):** The review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact.
- **EO (Environmental Objections):** The review has identified significant environmental impacts that should be avoided in order to adequately protect the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). The basis for environmental objections can include situations:
 1. Where an action might violate or be inconsistent with achievement or maintenance of a national environmental standard;
 2. Where the Federal agency violates its own substantive environmental requirements that relate to EPA's areas of jurisdiction or expertise;
 3. Where there is a violation of an EPA policy declaration;
 4. Where there are no applicable standards or where applicable standards will not be violated but there is potential for significant environmental degradation that could be corrected by project modification or other feasible alternatives; or
 5. Where proceeding with the proposed action would set a precedent for future actions that collectively could result in significant environmental impacts.
- **EU (Environmentally Unsatisfactory):** The review has identified adverse environmental impacts that are of sufficient magnitude that EPA believes the proposed action must not proceed as proposed. The basis for an environmentally unsatisfactory determination consists of identification of environmentally objectionable impacts as defined above and one or more of the following conditions:
 1. The potential violation of or inconsistency with a national environmental standard is substantive and/or will occur on a long-term basis;
 2. There are no applicable standards but the severity, duration, or geographical scope of the impacts associated with the proposed action warrant special attention; or
 3. The potential environmental impacts resulting from the proposed action are of national importance because of the threat to national environmental resources or to environmental policies.

RATING THE ADEQUACY OF THE ENVIRONMENTAL IMPACT STATEMENT (EIS)

- **1 (Adequate):** The Draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.
- **2 (Insufficient Information):** The Draft EIS does not contain sufficient information to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the Draft EIS, which could reduce the environmental impacts of the proposal. The identified additional information, data, analyses, or discussion should be included in the Final EIS.
- **3 (Inadequate):** The Draft EIS does not adequately assess the potentially significant environmental impacts of the proposal, or the reviewer has identified new, reasonably available, alternatives, that are outside of the spectrum of alternatives analyzed in the Draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. The identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. This rating indicates EPA's belief that the Draft EIS does not meet the purposes of NEPA and/or the Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised Draft EIS.



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MAR 18 2009

Coleen Sullins, Director
Division of Water Quality
North Carolina Department of Environment
and Natural Resources
1617 Mail Service Center
Raleigh, North Carolina 27699-1617

Dear Ms. Sullins:

The U. S. Environmental Protection Agency (EPA) received the revisions to *15A N.C.A.C. 2B Surface Water and Wetlands Standards, Section .0300 Assignment of Stream Classification* which were submitted for review by letter, dated March 19, 2008, and received on March 21, 2008. This letter is in reference to the reclassification of two segments in the Catawba River in the Catawba River Basin (*15A N.C.A.C. 2B .0308*). EPA is partially approving this change to standards as detailed below. A list of the reclassified waterbodies is enclosed.

The public hearing for this revision was held on November 1, 2006. North Carolina finalized the revisions to the State's water quality standards (WQS) with an effective date of May 1, 2007. This reclassification was certified by the North Carolina Attorney General by letter, dated March 13, 2008, as duly adopted pursuant to state law. In accordance with 40 C.F.R. Section 131.21(c), new and revised State and Tribal water quality standards are not effective for Clean Water Act (CWA) purposes until approved by EPA.

Pursuant to Section 303(c)(2) of the CWA, EPA has completed a review of North Carolina's revised standards for these two segments, which consist of the lower two segments of what is known as the Bridgewater Dam Tailrace, beginning approximately one mile below the Bridgewater Dam and ending at the City of Morgantown Water Intake Dam. EPA has determined that this revision of North Carolina's water quality standards to add the designation for the use of trout ("Trout") retains the goals of the Class C waters, including protection of all aquatic life uses and supporting water quality criteria of the State's Class C designation, which also apply to Trout waters. Such revision also includes additional protection of the waters as Trout waters. Therefore, since the water quality criteria and uses of the State's Class C designation provide for protection of the CWA Section 101(a)(2) uses (fishable/swimmable), the revision to the designated use of these two segments of the Catawba River are consistent with the goals of Section 101(a) of the CWA and the implementing regulations at 40 C.F.R. Part 131. The revision of these segments to Trout waters is also consistent with the requirements of 40 C.F.R. 131.10(i) for States to revise standards to reflect the uses actually being attained in the waterbody, and the requirements of 40 C.F.R. 131.12(a)(1) to protect and maintain existing instream water uses and the level of water quality necessary to protect those existing uses. Finally, the revision to the designated use of these two segments is consistent with State regulations at 15A N.C.A.C. 2B .0201(b)(2004) pertaining to the proper classification of waters in order to protect existing uses. Therefore, in accordance with Section 303(c) of the CWA and 40 C.F.R. Part 131, EPA is approving the revisions to designated use in these segments.

Based on the information in the record and provided in support of this revision, EPA has determined that North Carolina's inclusion in the revised standards for these two segments of a seasonal exemption from the approved state criterion for dissolved oxygen (DO) in Trout waters is not fully consistent with the applicable requirements of the CWA and federal and state regulations. Such regulations, including 40 C.F.R. § 131.11, provide that "States must adopt those water quality criteria that protect the designated use. Such criteria must be based on sound scientific rationale and must contain sufficient parameters or constituents to protect the designated use." Further, federal regulations under 40 C.F.R. § 131.6, provide that a State's WQS submission to EPA must include, at a minimum, "methods used and analyses conducted to support water quality standards revisions," as well as "water quality criteria sufficient to protect the designated use." Likewise, 40 C.F.R. § 131.20 provides that the State's submittal of revisions to WQSs shall include "the methodologies used for site-specific criteria development." Finally, 40 C.F.R. § 131.5(a) provides that, pursuant to Section 303(c) of the CWA, EPA must review and approve or disapprove state-adopted WQS, and this review involves the determination of "whether the State has adopted criteria that protect the designated water uses."

In this instance, the State of North Carolina did not provide any scientific justification to show that seasonal DO criterion lower than the State's approved trout DO criterion would be protective of the two trout species in the Tailrace. Consequently, EPA is disapproving the seasonal exemption portion of North Carolina's revisions to these two segments of the Catawba River.

The effect of EPA's partial disapproval will be to approve, for all CWA purposes, North Carolina's designation of these waters for Trout use, which automatically provides for the application of all of North Carolina's approved Trout criteria shown to be protective of the species; including those found at 15A N.C.A.C. 02B .0211. Specifically, the seasonal DO exemption is disapproved and stricken from the approved standard for all CWA purposes as follows:

"From a point 0.6 miles upstream of Muddy Creek to a point 0.5 miles upstream of Canoe Creek from WS-IV to WS-IV Trout and Catawba River from a point 1.2 miles upstream of Canoe Creek to a point 0.7 miles upstream of Canoe Creek (Morganton water supply intake) from WS-IC to WS-IV Trout. Named and unnamed tributaries to this portion of the Catawba River are not classified as Trout."

In accordance with 40 C.F.R 131.21(c), the approved revisions to the State water body classifications are now considered effective for CWA purposes.

With respect to the disapproved portion of North Carolina's water quality standards for these two segments, no additional action on the part of the State and/or EPA is required, as the standards that are now applicable upon this approval/disapproval action by EPA, meet the

requirements of the CWA. EPA recommends that North Carolina remove the disapproved seasonal exemption from the State's water quality standards during the next triennial review process in order to make the standards adopted by the State for these segments consistent with the federally approved standards.

If you have any questions, please feel free to contact Jim Giattina at (404) 562-9470.

Sincerely,

A handwritten signature in black ink, appearing to read 'A. Stanley Meiburg'.

A. Stanley Meiburg
Acting Regional Administrator

Enclosure (1)

Enclosure 1: Use Classification Modification

Catawba River Basin

Name of Stream	Description	Existing Class	Proposed Class
Catawba River (including back- Waters of Rhodhiss Lake Below elevation 995)	From a point 0.6 miles upstream of Muddy Creek to a point 1.2 miles upstream of Canoe Creek.	WS-IV	WS IV; Tr
Catawba River (including back- Waters of Rhodhiss Lake below elevation 995),	From a point 1.2 miles upstream of Canoe Creek to a point 0.7 miles upstream of Canoe Creek. (Morganton water supply intake.)	WS-V CA	WS-V; Tr, CA